

REMARKS

In the aforementioned Office Action, claims 1-26 were examined. Claims 1-26, were rejected under 35 U.S.C. §112 as failing to comply with the enablement requirement. Claims 1-20 and claims 23-25 were also rejected under 35 U.S.C. §101 because “the claimed invention is directed to non-statutory subject matter.” In view of the following remarks, Applicants respectfully request reconsideration of the application.

Rejection Under 35 USC §112

In paragraph 3 of the office action, the Examiner asserts that claims 1-26 “are all developed related to the ‘locally mean-reverting-diverting (LMRD) model’” and that “the specification does not enable the process from the definition of the LMRD model through to its implementation that allows one of ordinary skill in the art to replicate the invention without undue experimentation.” Applicants respectfully disagree and submit that the disclosure does meet the enablement requirement.

The present application describes a “locally mean-reverting-diverting (LMRD) model.” The LMRD allows for mean reverting behavior, mean diverting behavior, as well as oscillating mean reverting and diverting behavior. As indicated by the Examiner in paragraph 3, the process of deriving the LMRD is described in the specification and is achieved by relaxing the constraint imposed on the mean reverting family of models that the coefficient be greater than or equal to zero, and

instead the LMRD model allows the coefficient to take on negative values as well as values greater than or equal to zero (paragraph 0038, lines 21-25). Various potential manipulations or results of distribution values are further explained in detail.

By restricting the length of time over which the mean reversion is negative and/or limiting a magnitude of the coefficient, values that diverge too far from the mean value of the process may be avoided (paragraph 44, lines 11-14). Because of this type of calibration, parameters can then be chosen that best represent values of the uncertainty-based forecast. Thus, the appropriate LMRD model can be chosen based on the uncertainty-based values and the input data. "By selecting the form of the random term that best matches the distribution suggestion by available information (i.e., input data) for individual periods of time, the optimal form of the random term of the model over time... may accordingly be identified." (paragraph 52) Two exemplary methods for determining parameter values using expert opinion and analysis may also be employed.

Although Applicants utilize exemplary formulas, a detailed description of the invention is also set forth in the numerous pages of the specification. Furthermore, "the quantity of experimentation needed to be performed by one skilled in the art is only one factor involved in determining whether "undue experimentation" is required to make and use the invention. "[A]n extended period of experimentation may not be undue if the skilled artisan is given sufficient direction or guidance." *In re Colianni*, 561 F.2d 220, 224, 195 USPQ 150, 153 (CCPA 1977). The detailed description

of the various manners for creating the LMRD model and using the model provides sufficient direction and guidance. Thus, even if the formulas were employed in order to make and use the invention, Applicants assert, respectfully, that any alleged experimentation required is not undue.

For example, the court reversed the findings of the district court for lack of clear and convincing proof that undue experimentation was needed in *United States v. Telectronics, Inc.*, 857 F.2d 778, 8 USPQ2d 1217 (Fed. Cir. 1988), *cert. denied*, 490 U.S. 1046 (1989). The court ruled, instead, that since one embodiment (stainless steel electrodes) and the method to determine the embodiment was set forth in the specification, the specification was enabling. The question of time and expense of such studies, approximately \$50,000 and 6-12 months standing alone, failed to show undue experimentation. Applicants believe that the present specification specifically sets forth details of the invention, in the explanation and exemplary formulas, that avoid undue experimentation.

For these reasons, Applicants respectfully request that the Examiner withdraw the 35 U.S.C. §112 rejection.

Rejection Under 35 U.S.C. §101

In paragraph 5, the Examiner rejected claims 1-20 and 23-25 as being “directed to non-statutory subject matter.”

Applicants respectfully traverse this rejection. However, in order to expedite prosecution of the present application, the claims have been amended. Amended independent claims 1, 12, and 23 now recite computer implemented systems and methods. Claims 2-11, 13-20, and 24-25 are dependent upon claims 1, 12, and 23, respectively, and as such, Applicants believe that claims 1-20 and 23-25 are in allowable form.

For these reasons, Applicants respectfully request that the Examiner withdraw the 35 U.S.C. §101 rejection.

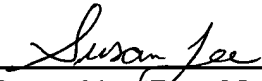
Conclusion

Based on the above remarks, Applicants believe that the rejections in the Office Action of December 28, 2004 are fully overcome, and that the application is in condition for allowance. If the Examiner has questions regarding the case, he is invited to contact Applicants' undersigned representative at the number given below.

Respectfully submitted,

Blake Johnson et al.

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